Gary Behrns
Superfund Section
Department of Natural Resources
P. O. Box 176
Jefferson City, MO 65102-0176

RE: West Lake Draft Baseline Risk Assessment

Dear Mr. Behrns:

As requested by the Department of Natural Resources, the Department of Health (MDOH) has reviewed the Draft Baseline Risk Assessment for West Lake Landfill Operable Unit 1. MDOH disagrees with some of the basic assumptions made in this assessment and the input exposure parameters used. MDOH offers the following comments:

The use of Region 3 screening values is not recommended due to errors in the values. EPA has requested that the Region 3 tables not be used in risk assessments.

In Section A.3.1.8.2, future land use is discussed. It is assumed that due to the deed restrictions that future exposure at the site will be the same as current exposure. This may not be the case. Although some development may be restricted, occupational activities and exposures may change. Currently, according to the text, there is little access to the site for workers. However, worker exposure could increase in the future if the site is remediated to "safe" occupational levels, levels based on the minimal current occupational exposure. Construction and building installation in the area immediately surrounding Areas 1 and 2 is not restricted. These adjacent areas could be occupationally developed in the future and Areas 1 and 2 could be included in this usage without buildings being built, for example as equipment storage areas or as recreational grounds for employees. There is no method to restrict the type and magnitude of occupational exposure, therefore, any assessment of future risk should include a reasonable maximum exposure to occupational workers.

The exposure frequency presented in Section A.3.2.5 of one day per year for a groundskeeper is too low. Please indicate any documentation that all the grounds are currently only mowed once per year. The future exposure frequency can be realistically expected to be greater than one day per year due to possible future activities such as adjacent industrial or on-site storage, etc.

The default value of 0.001 used for dermal absorption is referenced to EPA (1995). The revised 1997 dermal guidance from EPA recommends a value of 0.01 be used for a default for inorganics. This should be corrected.

Many of the exposure variables are non-standard and relatively low. The default exposure duration for the groundskeeper scenario should be 25 years, not 6.6 years. The exposure frequency for the groundskeeper at all areas should be 26 days per year. The exposure time for the groundskeeper at all areas should be 8 hours per day. The standard EPA ingestion rate for a groundskeeper is 0.48 grams per day, not 0.1 grams per day as stated.

The fraction of ingestion should be 100% for the groundskeeper. The groundskeeper is assumed by EPA to receive the bulk of the 480 mg of soil (EPA default) ingested to be at work during his job as groundskeeper.

The adherence factor used in this assessment, 0.007 mg/cm2, is extremely non-conservative. The referenced document presents several options. Historically EPA has defaulted with an adherence factor of 1.0. The use of this lower value may significantly underestimate the risk to those exposed.

The carcinogenic averaging time should be 25,550 days (350 days per year for 70 years).

In general, this assessment used selective non-conservative numerical inputs and assumptions that significantly underestimates the risk to those exposed both currently and in the future. The use of these lower variables reduces the calculated risk from this site by as much as five significant digits or more, as compared to the use of EPA future default values. That level of possible underestimation in a risk assessment is not acceptable. MDOH also requests that a future full-time occupational scenario be included using EPA default variables to be protective of future public health.
We appreciate the opportunity to participate in this matter. If you have any questions, please contact Pam Holley at (573) 751-6404.

Sincerely,

Daryl Roberts
Director
Section for Environmental Public Health

dr/sc/ph

SVERDRUP ENVIRONMENTAL, INC.